

# **Construction of Trainable Semantic Vectors and Clustering, Classification, and Searching Using Trainable Semantic Vectors**

## **ABSTRACT OF THE DISCLOSURE**

An apparatus and method are disclosed for producing a semantic representation of information in a semantic space. The information is first represented in a table that stores values which indicate a relationship with predetermined categories. The categories  
5 correspond to dimensions in the semantic space. The significance of the information with respect to the predetermined categories is then determined. A trainable semantic vector (TSV) is constructed to provide a semantic representation of the information. The TSV has dimensions equal to the number of predetermined categories and represents the significance of the information relative to each of the predetermined categories. Various  
10 types of manipulation and analysis, such as searching, classification, and clustering, can subsequently be performed on a semantic level.